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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/706,199	11/12/2003	Christopher N. Delametter	79799BWRZ	5980

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Milt S. Sales  
Patent Legal Staff  
Eastman Kodak Company  
343 State Street  
Rochester, NY 14650-2201

EXAMINER
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STEPHENS, JUANITA DIONNE

ART UNIT	PAPER NUMBER
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2853

DATE MAILED: 02/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/706,199	<b>Applicant(s)</b> DELAMETTER ET AL.	
	<b>Examiner</b> Juanita D. Stephens	<b>Art Unit</b> 2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on CIP filed 11/12/03.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/12/03</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 3, 4-8, 26, 28, 29, and 30 are rejected under 35 U.S.C. 102(e) as being anticipated by Murthy et al. (US 6,045,214).

Murthy et al. discloses a print head and a liquid emission device comprising (Fig.

- 1): **1)** a body (formed by print head itself), **2)** portions of the body defining an ink delivery channel (ink supply channels 16 and ink supply region 24), **3)** other portions of the body defining a nozzle bore (nozzle holes 18), the nozzle bore being in fluid communication with the ink delivery channel (col 3, Ins 45-47), **4)** an obstruction (projection or appendage 26) having an imperforate surface positioned in the ink delivery channel (col 4, Ins 24-29), **5)** the ink delivery channel having at least one wall, wherein the obstruction is attached to the at least one wall (col 4, Ins 24-29), **6)** the ink delivery channel having at least one wall, wherein the obstruction is integrally formed with the at least one wall (col 4, Ins 24-29), **7)** an ink drop forming mechanism (ink propulsion device 22) operatively associated with the nozzle bore (col 3, Ins 56-62), **8)** wherein the ink drop forming mechanism (ink propulsion device 22) is positioned on the

print head at a location other than the obstruction (as seen in Fig. 1), **9**) wherein the ink drop forming mechanism is a heater (ink propulsion device 22), and **10**) wherein the heater includes a selectively actuated section (col 3, Ins 56-62).

### ***Double Patenting***

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-11, 17-18, 22, and 24-30 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 9, 12, 13, 14, 15, 20, 21, 22, 32, 33, 34, 35, 36, 37 38, and 40 of U.S. Patent No. US 6,761,437 B2. Although the conflicting claims are not identical, they are not patentably distinct from each other because Delametter et al. (US 6,761,437 B2) discloses a print head comprising: **1**) a body, portions of the body defining an ink delivery channel, other portions of the body defining a nozzle bore, the nozzle bore being in fluid communication with the ink delivery channel (col 6, Ins 7-10 of claim 9), **2**) an obstruction having an imperforate surface positioned in the ink delivery channel (col 6, Ins 11-12), **3**) wherein the obstruction is centered over the nozzle bore (col 6, Ins 56-57

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of claim 21), **4**) the ink delivery channel having at least one wall, wherein the obstruction is attached to the at least one wall (col 8, Ins 3-5 of claim 34), **5**) the ink delivery channel having at least one wall, wherein the obstruction is integrally formed with the at least one wall (col 8, Ins 6-8 of claim 35), **6**) an ink drop forming mechanism operatively associated with the nozzle bore (col 6, Ins 23-26 of claim 12), **7**) wherein the ink drop forming mechanism is positioned on the print head at a location other than the obstruction (col 6, Ins 27-29 of claim 13), **8**) wherein the ink drop forming mechanism is a heater (col 6, Ins 30-31 of claim 14), **9**) wherein the heater includes a selectively actuated section (col 6, Ins 32-33 of claim 15), **10**) the obstruction having a lateral wall, wherein the lateral wall of the obstruction is positioned in the ink delivery channel parallel to the nozzle bore as viewed from a plane perpendicular to the nozzle bore (col 8, Ins 19-23 of claim 40), **11**) the nozzle bore having a diameter, the obstruction having a vertical wall, wherein the vertical wall of the obstruction is positioned in the ink delivery channel at locations extending beyond the diameter of the nozzle bore (col 6, Ins 51-55 of claim 20), and **12**) the nozzle bore having a diameter, the obstruction having a vertical wall, wherein the vertical wall of the obstruction is positioned in the ink delivery channel at a location substantially equivalent to the diameter of the nozzle bore (col 6, Ins 58-62 of claim 22). Delametter et al. (US 6,761,437 B2) further discloses a liquid emission device comprising: **1**) an ink delivery channel (col 7, Ins 30-31 of claim 32), **2**) a nozzle bore in fluid communication with the ink delivery channel (col 7, Ins 32-33 of claim 32), **3**) an ink drop forming mechanism operatively associated with the nozzle bore (col 8, Ins 8-11 of claim 36), **4**) an obstruction having an imperforate surface

positioned in the ink delivery channel (col 7, lns 34-35 of claim 32), **5)** wherein the obstruction is centered over the nozzle bore (col 8, lns 1-2 of claim 33), **6)** the ink delivery channel having at least one wall, wherein the obstruction is integrally formed with the at least one wall (col 8, lns 6-8 of claim 35), **7)** wherein the ink drop forming mechanism is positioned on the print head at a location other than the obstruction (col 8, lns 13-15 of claim 37), and **8)** wherein the ink drop forming mechanism is a heater (col 8, lns 16-17 of claim 38).

5. Claims 12-16, 19-21, 23, and 31 rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 9, 12, 32 and 36 of Delametter et al. (U.S. Patent No. 6,761,437 B2) in view of DeBoer (US 5,966,154).

Delametter et al. are discussed above. The claims of Delametter et al. does not disclose **1)** an insulating material located between the heater and at least one of the fluid delivery channel and the nozzle bore (recited in claim 12 of the application), **2)** wherein the insulating material forms at least a portion of at least one of the nozzle bore and the fluid delivery channel (recited in claim 13), **3)** wherein the insulating material is positioned between the heater and the material forming the nozzle bore (recited in claim 14), **4)** wherein the insulating material is positioned between the heater and the material forming the fluid delivery channel (recited in claim 15), **4)** wherein the heater comprises a plurality of individually actuateable sections (recited in claims 16, 23 and 31), **5)** an insulating material positioned between the drop forming mechanism and the body (recited in claim 19), **6)** wherein the insulating material forms at least a portion of the body (recited in claim 20), and **7)** wherein the insulating material is a material layer

distinct from the body (recited in claim 21). DeBoer at least teaches an insulating material (56) located between the heater (50) and at least one of the fluid delivery channel (40) and the nozzle bore (46) (as seen in Fig. 2A), wherein the insulating material (56) forms at least a portion of at least one of the nozzle bore and the fluid delivery channel, wherein the insulating material is positioned between the heater and the material forming the nozzle bore (as seen in Fig. 2A), wherein the insulating material (56) is positioned between the heater (50) and the material forming the fluid delivery channel (col 6, lns 8-10 and as seen in Fig. 2A), wherein the heater comprises a plurality of individually actuateable sections (col 6, lns 14-15), an insulating material positioned between the drop forming mechanism (heater 50) and the body, wherein the insulating material forms at least a portion of the body, and wherein the insulating material is a material layer distinct from the body (as seen in Fig. 2A). It would have been obvious at the time of the invention was made to a person having ordinary skill in the ink jet art to modify Delametter et al. by providing the insulating layer as taught to be old by DeBoer for the purpose of minimizing heat loss to the substrate.

#### **Contact Information**

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juanita D. Stephens whose telephone number is (571) 272-2153. The examiner can normally be reached on Flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Juanita D. Stephens". The signature is fluid and cursive, with a large initial "J" and a long, sweeping underline.

Juanita D. Stephens  
Primary Examiner  
Art Unit 2853

February 16, 2005